



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/614,322	07/07/2003	Amy E. Battles	10016217-1	7357

22879 7590 10/04/2006

HEWLETT PACKARD COMPANY
P O BOX 272400, 3404 E. HARMONY ROAD
INTELLECTUAL PROPERTY ADMINISTRATION
FORT COLLINS, CO 80527-2400

EXAMINER

HERNANDEZ, NELSON D

ART UNIT PAPER NUMBER

2622

DATE MAILED: 10/04/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/614,322

Applicant(s)

BATTLES ET AL.

Examiner

Nelson D. Hernandez

Art Unit

2622

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application
- ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claim 9 is objected to because of the following informalities: in lines 8-9, "... one of an image from memory ..." should be changed to "... one of an image from the memory ...". Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. **Claims 1-6, 15 and 16 are rejected under 35 U.S.C. 102(e) as being anticipated by Takahashi, US 2004/0004671 A1.**

Regarding claim 1, Takahashi discloses a method for setting an image capture device (See fig. 2) to one of a plurality of available operational modes (playback and shooting modes) for said image capture device, said method comprising: determining an angle of pitch orientation of said image capture device (Page 3, ¶ 0049-0050; page 4, ¶ 0059-0061); and setting said image capture device to said one of said plurality of operational modes (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6,

¶ 0105) if said angle of pitch orientation is within a predetermined angle range associated with said one of said plurality of operational modes (Page 3, ¶ 0049-0050; page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105).

Regarding claim 2, Takahashi discloses that the plurality of operational modes comprises an image capture mode and an image review mode (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105).

Regarding claim 3, Takahashi discloses setting said image capture device to operate within said image capture mode when said angle of pitch orientation is not within said predetermined range (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105) (The camera change to image capture mode if the pitch orientation is not in the predetermined range for playback mode).

Regarding claim 4, Takahashi discloses displaying a real-time image captured by said image capture device on a display when said image capture device is set to operate according to said image capture mode (Page 4, ¶ 0059).

Regarding claim 5, Takahashi discloses setting said image capture device to said image review mode when said angle of pitch orientation is not within said predetermined range (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105) (The camera change to playback mode if the pitch orientation is not in the predetermined range for image capture mode).

Regarding claim 6, Takahashi discloses displaying an image stored in memory on a display when said image capture device is set to operate according to said image

Art Unit: 2622

review mode (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105).

Regarding claim 15, Takahashi discloses an imaging system (See fig. 1), comprising: means for capturing an image (Camera 10 as shown in fig. 1); means for displaying an image (monitor shown in fig. 1); means for storing images (Fig. 7: 82); sensor means for determining an angle of pitch orientation of said system (Fig. 7: 124); and control means (Fig. 7: 62) for causing said means for displaying to display an image from said means for storing when said angle of pitch orientation is within a predetermined angle range (Page 3, ¶ 0049-0050; page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105).

Regarding claim 16, Takahashi discloses that the control means further causes said means for displaying to display an image currently captured by said means for capturing when said angle of pitch orientation is not within said predetermined angle range (Page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105) (The camera change to image capture mode displaying the image in real time (video conference) if the pitch orientation is not in the predetermined range for playback mode).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

Art Unit: 2622

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 7, 8, 18 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Sundahl et al., US Patent 6,094,215.

Regarding claim 7, Takahashi discloses determining the angle of pitch orientation but does not explicitly disclose that the determining the angle of pitch orientation includes determining a value associated with a signal from a micro-electro-mechanical system (MEMs) sensor.

However, determining the orientation of a camera by determining a value associated with a signal from a micro-electro-mechanical system (MEMs) sensor is notoriously well known in the art as taught by Sundahl et al. Sundahl et al. teaches a camera (Fig. 1: 104) comprising a motion sensor (Fig. 1: 128) including two MEMs sensors, one for detecting lateral acceleration and the other to detect the rotation of the camera, said MEMs sensors are used to associate the images being taken to the orientation of the camera (Col. 2, line 11 – col. 3, line 27).

Therefore, taking the combined teaching of Takahashi in view of Sundahl et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by determining a value associated with a signal from a micro-electro-mechanical system (MEMs) sensor. The motivation to do so would have been to accurately determine the orientation of the camera and to decrease the overall weight and size of the image capture device since the small size and weight of MEMs sensors.

Regarding claim 8, limitations can be found in claim 7.

Regarding claim 18, limitations can be found in claim 7.

Regarding claim 19, limitations can be found in claim 7.

6. Claims 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Anderson, US Patent 6,563,535.

Regarding claim 9, Takahashi discloses an imaging device (See fig. 2), comprising: an image capturing component for creating a digital image from a received optical image (Fig. 7: 60); a display (Fig. 3: 26) for displaying an image; a memory for storing a plurality of digital images (Fig. 7: 82); a pitch orientation sensor (Fig. 7: 124) for generating a signal related to a pitch angle of said imaging device (Page 3, ¶ 0049-0050; page 4, ¶ 0059-0061); user interface control logic for presenting, on a display (monitor of computer as shown in fig. 1; page 4, ¶ 0059-0061; page 5, ¶ 0090-0092), one of an image from the memory and an image currently captured by said image capturing component in response to a signal from said pitch orientation sensor (Page 3, ¶ 0049-0050; page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105).

Takahashi does not explicitly disclose that the display being used for displaying one of an image from the memory and an image currently captured by said image capturing component in response to a signal from said pitch orientation sensor is the display of the camera.

However, Anderson teaches an imaging device (Fig. 1), comprising: an image capturing component (Fig. 1: 104) for creating a digital image from a received optical image; a display (Fig. 1: 107) for displaying an image; a memory (Fig. 1: 109) for storing a plurality of digital images; an orientation sensor (Fig. 1: 112) for generating a signal related to an angle of said imaging device (Col. 4, lines 52-61); user interface control (Fig. 1: 106) logic for presenting, on said display, one of an image from memory and an image currently captured by said image capturing component in response to a signal from said pitch orientation sensor (As taught in col. 7, line 1 – col. 8, line 67, Anderson teaches that the image displayed in the LCD will be changes based on the orientation of the camera (the images displayed in the LCD will be rotated based said orientation of the camera)) (Col. 4, lines 35-61; col. 7, line 1 – col. 8, line 67).

Therefore, taking the combined teaching of Takahashi in view of Anderson as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by using the concept of affecting the images displayed on the display of the camera based on the orientation of said camera taught by Anderson in order to display in the display of the camera one of an image from the memory and an image currently captured by said image capturing component in response to a signal from said pitch orientation sensor. The motivation to do so would have been to improve the imaging device by reviewing the images being captured and images stored in the camera without using an external display so as to increase the portability of the imaging device.

Regarding claim 10, the combined teaching of Takahashi in view of Anderson as applied to claim 9 teaches that the user interface control logic determines whether said signal indicative of said pitch angle is within a predetermined range (See Takahashi, (page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105; see also Anderson, page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105). Grounds for rejecting claim 9 apply here.

Regarding claim 11, the combined teaching of Takahashi in view of Anderson as applied to claim 9 teaches that the user interface control logic presents, on said display (See Anderson, page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105), an image from memory when said signal indicative of said pitch angle is within a predetermined range (See Takahashi, (page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105; see also Anderson, page 4, ¶ 0059-0061 and 0074-0075; page 5, ¶ 0089-0092; page 6, ¶ 0105). Grounds for rejecting claim 9 apply here.

7. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Anderson, US Patent 6,563,535 and further in view of Pilu, US 2001/0019664 A1.

Regarding claim 12, the combined teaching of Takahashi in view of Anderson fails to teach a user input control, wherein said user interface logic ceases to control said display in response to said signal indicative of said pitch angle in response to input received from said user input control.

However, ceasing an operation of a camera that is based on a sensed orientation of the camera is notoriously well known in the art as taught by Pilu. Pilu discloses an imaging device (Figs. 1: 1 and 4: 40) comprising an orientation sensor (Fig. 1: 15); input a signal to the camera to change from one capture mode to the other ("document capture mode" and "scene capture mode") (Page 4, ¶ 0059). Pilu also teaches that the imaging device may also have an override feature to disable the orientation sensing operation if the user wants to capture an image or document at a tilt angle that belongs to a different mode (Page 2, ¶ 0020) (See also page 1, ¶ 0015; page 3, ¶ 0045).

Therefore, taking the combined teaching of Takahashi in view of Anderson and further in view of Pilu as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi and Anderson by using the concept of overriding the camera operation that is based on the tilt of the camera in order to cease controlling said display in response to said signal indicative of said pitch angle in response to input received from said user input control. The motivation to do so would have been to improve the imaging device by overriding the operation of the camera that is based in the tilt angle of said camera so that the user can capture images of object at a lower line of sight (i.e. a small child or object).

8. Claims 13 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Anderson, US Patent 6,563,535 and further in view of Sundahl et al., US Patent 6,094,215.

Regarding claim 13, the combined teaching of Takahashi in view of Anderson fails to teach that the pitch orientation sensor is a micro-electro-mechanical system (MEMs) sensor.

However, determining the orientation of a camera by determining a value associated with a signal from a micro-electro-mechanical system (MEMs) sensor is notoriously well known in the art as taught by Sundahl et al. Sundahl et al. teaches a camera (Fig. 1: 104) comprising a motion sensor (Fig. 1: 128) including two MEMs sensors, one for detecting lateral acceleration and the other to detect the rotation of the camera, said MEMs sensors are used to associate the images being taken to the orientation of the camera (Col. 2, line 11 – col. 3, line 27).

Therefore, taking the combined teaching of Takahashi in view of Sundahl et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by determining a value associated with a signal from a micro-electro-mechanical system (MEMs) sensor. The motivation to do so would have been to accurately determine the orientation of the camera and to decrease the overall weight and size of the image capture device since the small size and weight of MEMs sensors.

Regarding claim 14, limitations can be found in claim 13.

Art Unit: 2622

9. Claim 17 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Pilu, US 2001/0019664 A1.

Regarding claim 17, Takahashi discloses an input means for receiving user input, wherein said control means ceases to operate in response to predefined input from said input means.

However, having an input means to cease an operation of a camera that is based on a sensed orientation of the camera is notoriously well known in the art as taught by Pilu. Pilu discloses an imaging device (Figs. 1: 1 and 4: 40) comprising an orientation sensor (Fig. 1: 15); input a signal to the camera to change form one capture mode to the other ("document capture mode" and "scene capture mode") (Page 4, ¶ 0059). Pilu also teaches that the imaging device may also have an override feature to disable the orientation sensing operation if the user wants to capture an image or document at a tilt angle that belongs to a different mode (Page 2, ¶ 0020) (See also page 1, ¶ 0015; page 3, ¶ 0045).

Therefore, taking the combined teaching of Takahashi in view of Pilu as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi by using the concept having an input means to override the camera operation that is based on the tilt of the camera in order to have an input means to cease controlling said display in response to said signal indicative of said pitch angle in response to input received from said user input control. The motivation to do so would have been to improve the imaging device by overriding the operation of the

Art Unit: 2622

camera that is based in the tilt angle of said camera so that the user can capture images of object at a lower line of sight (i.e. a small child or object).

10. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi, US 2004/0004671 A1 in view of Sundahl et al., US Patent 6,094,215 and further in view of McCall et al., US Patent 6,494,093 B2.

Regarding claim 20, the combined teaching of Takahashi in view of Sundahl et al. teaches the use of MEMs sensors to read inclination and acceleration but fails to teach that the signal is indicative of a distance between electrostatic plates.

However, McCall et al. teaches using the distance between electrostatic plates in MEMs to determine sense an acceleration on a device since the acceleration is related to the capacitance between the electrostatic plates (while the distance between plates increases or decreases, the capacitance also changes and said changes can be read to determine the acceleration of a device) (Col. 3, line 23 – col. 4, line 9).

Therefore, taking the combined teaching of Takahashi in view of Sundahl et al. in view of McCall et al. as a whole, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Takahashi and Sundahl et al. by determining the acceleration in the imaging system based on the distance between the electrostatic plates. The motivation to do so would have been to accurately measure the acceleration in the imaging system by using the changes in capacitance between said plates.

Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Nelson D. Hernandez whose telephone number is (571) 272-7311. The examiner can normally be reached on 8:30 A.M. to 6:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Nelson D. Hernandez
Examiner
Art Unit 2622

NDHH
September 26, 2006



VIVEK SRIVASTAVA
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600